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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,846	11/11/2005	Jacques Beaurain	LDR/10/US - 21249.014US1	7881
36485	7590	04/18/2007	EXAMINER	
J. SCOTT DENKO ANDREWS & KURTH LLP 111 CONGRESS AVE., SUITE 1700 AUSTIN, TX 78701			YANG, ANDREW	
			ART UNIT	PAPER NUMBER
			3733	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/18/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/533,846	BEAURAIN ET AL.
	Examiner	Art Unit
	Andrew Yang	3733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 10 April 2007.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 21-40 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 21-40 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 04 May 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>5/18/2006</u>	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____

**DETAILED ACTION**

***Priority***

It is noted that this application appears to claim subject matter disclosed in prior Application No. PCT/IB03/04872, filed 10/31/2003. A reference to the prior application must be inserted as the first sentence(s) of the specification of this application or in an application data sheet (37 CFR 1.76), if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e), 120, 121, or 365(c). See 37 CFR 1.78(a). For benefit claims under 35 U.S.C. 120, 121, or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of all nonprovisional applications. If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference to the prior application must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e),

120, 121 and 365(c). A benefit claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If the reference to the prior application was previously submitted within the time period set forth in 37 CFR 1.78(a), but not in the first sentence(s) of the specification or an application data sheet (ADS) as required by 37 CFR 1.78(a) (e.g., if the reference was submitted in an oath or declaration or the application transmittal letter), and the information concerning the benefit claim was recognized by the Office as shown by its inclusion on the first filing receipt, the petition under 37 CFR 1.78(a) and the surcharge under 37 CFR 1.17(t) are not required. Applicant is still required to submit the reference in compliance with 37 CFR 1.78(a) by filing an amendment to the first sentence(s) of the specification or an ADS. See MPEP § 201.11.

***Claim Objections***

Claim 21 is objected to because of the following informalities:

In claim 21, line 7, the comma between "plate" and "around" should be removed.

Appropriate correction is required.

Claims 26, 31-35 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from another multiple independent claim. See MPEP § 608.01(n). Accordingly, the claims 26, 31-35 have not been further treated on the merits.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 21, line 9, "the planes" lacks a prior antecedent.

In claim 29, lines 1-2, "the dimensions of each male means" lacks a prior antecedent.

In claim 30, lines 1-2, "the dimensions of each male means" lacks a prior antecedent.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

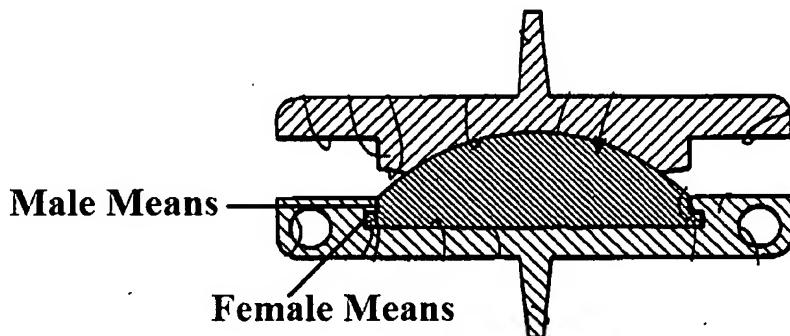
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 21-23, 28, 30, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Marnay et al. (U.S. Patent No. 6936071).

Marnay et al. discloses an intervertebral implant with an upper plate 2, a lower plate 3, and a core 4. Core is made of polyethylene (Column 5, Line 37), has an upper convex surface 25 in contact with the lower concave surface 12 of the upper plate 2 and a lower surface in contact with the upper surface of the lower plate 3, with the upper plate 2 being moveable with respect to the core 4 (Column 5, Lines 43-53). The lower plate has cooperation means 27 not located in the middle of the core between the lower plate and the core. The cooperation means serves to fix the core 4 to the lower plate 3 (Column 5, Lines 16-19), thus limiting or eliminating translation movements with respect to the lower plate around an axis parallel to the lower plate, and rotation movements with respect to the lower plate around an axis perpendicular to the lower plate. With reference to the figure on the next page, the cooperation means has a male means and a female means. The male means cooperating with a female means of the core 4, and

the female means of the lower plate cooperating with a male means of core 4. In both cases the cooperating means of the lower plate 3 have substantially the same dimensions of the cooperating means of the core 4.



Claims 21, 27, and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Beaurain et al (U.S. Publication No. 2004/0243240).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Beaurain et al. discloses an intervertebral implant with an upper plate 3, a lower plate 1, and a core 2. The core 2 is moveable with respect to the upper and lower plates 1, 3 (Figure 6c), has an upper convex surface 23 for articulation with a lower concave surface 32 of the upper plate 3 and a lower surface being in contact with the upper surface of the lower plate 1 (Paragraph 45). The lower plate 1 has cooperation

means 163 no located in the middle of the core between the lower plate and the core (Figure 9b) and limit translation movements of the core around an axis parallel to the lower plate 1 and rotation movements of the core around an axis perpendicular to the lower plate 1 (Paragraph 64). The cooperation means of the lower plate has dimensions that are less than those of the cooperation means of the core (Figure 9b).

Claims 21, 37, 39, and 40 are rejected under 35 U.S.C. 102(e) as being anticipated by Aebi et al. (U.S. Publication No. 2006/122703).

Aebi et al. discloses an intervertebral implant with an upper plate 10 having a convex upper surface (Figure 3), a lower plate 20, and a core 32. The core 32 has a lower convex surface 57 an upper concave surface 56. The upper and lower surfaces 56, 57 are for articulation with an upper concave portion 58 of the lower plate 20, and the lower surface 55 of the upper plate 10. The reverse configuration can also be used for the articulation surfaces (Paragraph 16) so that the core 32 has an upper convex surface articulating with a lower concave surface of the upper plate and the lower surface of the core 32 being in contact with an upper surface of the lower plate.

The lower plate 20 has a cooperation means 91 not located in the middle of the core between the lower plate 20 and the core 32. Cooperating means 91 works with member 90 and limits translation movements along an axis 3 parallel to the lower plate and rotation movements along an axis 2 perpendicular to the lower plate. The lower plate 20 also has two circular holes 80 proximal to its front side to its front side for receiving bone fixation means 81 that are nail shaped and form an acute angle with the lower plate (Figure 4).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marnay et al. (U.S. Patent No. 6936071) in view of Graf (U.S. Patent No. 6419706).

Marnay discloses the claimed invention except for the core forming an acute angle in a front-rear direction. Graf teaches an intervertebral disc with a core 4 and upper and lower plates 6. The core 4 has a greater transverse dimension at its front part than at its rear, forming an acute angle from front-rear direction, which gives the device a lordosis appearance, which is found to be advantageous from a physiological point of view (Column 9, Lines 57-59). It would have been obvious to one skilled in the art at the time the invention was made to construct the device of Marnay et al. with a core that forms an acute angle in the front-rear direction in view of Graf so that the device would have a lordosis appearance that is physiologically advantageous.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marnay et al. (U.S. Patent No. 6936071) in view of Graf (U.S. Patent No. 6419706) and further in view of Coates et al. (6899735).

Marnay et al. and Graf disclose the claimed invention except for a second core with a thickness that differs from the first core. Coates et al. teaches an intervertebral disc with a core 70 and upper and lower plates 20. After installation, the core 70

between the plates 20 can be removed to allow the surgeon to try another size of the core 70 without removing the plates from the vertebral members (Column 1, Lines 66-67 and Column 2 Lines 1-3). This feature is provided with the device since it is not always possible to predetermine the size of the core needed for the operation (Column 1, Lines 34-40). It would have been obvious to one skilled in the art at the time the invention was made to construct the device of Marnay et al. in view of Graf with a second core with a thickness different from the first core in further view of Coates et al. to allow a surgeon to try a different size core since it is not always possible to predetermine the proper size core for an operation.

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aebi et al. (U.S. Publication No. 2006/0122703).

Aebi et al. discloses the claimed invention except for the openings being rectangular. It would have been an obvious matter of design choice to one skilled in the art at the time the invention was made to construct the holes of Aebi with a rectangular shape, since applicant has not disclosed that such solves any stated problem or is anything more than one of numerous shapes or configurations a person with ordinary skill in the art would find obvious for the purpose of providing an anchoring means into adjacent vertebrae. *In re Dailey and Eilers*, 149 USPQ 47 (1966).

### **Conclusion**

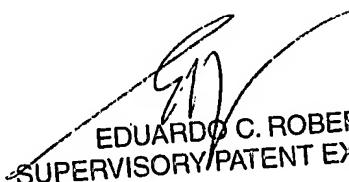
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 6179873.

Any inquiry concerning this communication from the examiner should be directed to Andrew Yang whose telephone number is 571-272-3472. The examiner can normally be reached Monday-Friday 7:30 am – 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful the examiner's supervisor, Eduardo Robert can be reached at 571-272-4719. The fax number for the organization where this application is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private Pair only. For More information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact Electronic Business Center (EBC) at 866-217-9197 (toll free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (USA OR CANADA) or 571-272-1000.

A.Y.



EDUARDO C. ROBERT  
SUPERVISORY PATENT EXAMINER

4/10/2007